Background

The Minerals Council of Australia (MCA) welcomes the opportunity to represent the minerals industry to the Senate Committee in its review of the operation of the *Environment Protection and Biodiversity Conservation Act 1999* ('the Act'). Members of the MCA, representing over 85% of minerals production in Australia, have a long-standing commitment to sustainable development including the responsible stewardship of natural resources.

Most minerals operations are in regional and remote Australia. Many minerals companies own or manage larger tracts of land than those that are subject to extraction activities. Additionally many companies undertake exploration activities across land owned or leased by others. In regional and remote Australia, minerals companies are a major contributor to natural resource management, including biodiversity conservation outcomes. In many parts of the landscape, minerals operations provide the only on-ground environmental professionals with capacity and capability for monitoring and reporting of ecological parameters. The point being that MCA members are on the ground, in the landscape, every day, managing biodiversity and natural resources more broadly.

Here we table additional information for the Senate Committee's consideration: (1) a compendium of case studies capturing the minerals industry's commitment to biodiversity conservation; and (2) a coarse analysis of the Act's operation, the level of involvement of the minerals industry in its administration, and a preliminary analysis of the Act's intersection with a variety of landscape users (not all).

1. Case Studies of Minerals Industry Leading Practice in Biodiversity Management and Conservation

The Australian Minerals Industry & Biodiversity Policy

In line with this commitment to sustainable development, the MCA has developed *Enduring Value – The Australian Minerals Industry Framework for Sustainable Development.* Developed with the input of over 900 stakeholders, *Enduring Value* contains a series of principles, elements and implementation guidance that provides a framework for the integration of environmental, social and economic considerations into mining and minerals processing at the site level. Commitment to *Enduring Value*, including public reporting of implementation, is a condition of membership to the MCA.

As members of the MCA, over 30 leading minerals companies are signatories to *Enduring Value – The Minerals Industry Framework for Sustainable Development* (see www.minerals.org.au for a list of our members). *Enduring Value* provides operational guidance on the implementation of the International Council on Mining and Metals' 10 principles of sustainable development.

Companies that are signatories to *Enduring Value*, are required in their operations in Australia to:

- Contribute to conservation of biodiversity and integrated approaches to land use planning [including]:
    - Respect legally designated protected areas.
    - Disseminate scientific data on and promote practices and experiences in biodiversity assessment and management.
    - Support the development and implementation of scientifically sound, inclusive and transparent procedures for integrated approaches to land use planning, biodiversity, conservation and mining.

Although *Enduring Value* was only established in 2005, there are several excellent examples of how 'biodiversity conservation has been mainstreamed' for minerals operations, some examples of which pre-date *Enduring Value*. In 2008 the MCA released an updated land use policy to better-reflect the land use, including biodiversity management, activities of industry in the landscape (see http://www.minerals.org.au/enduringvalue for more information on *Enduring Value*, and http://www.minerals.org.au/environment/Land_Use_Policy for more information on the land use policy).

Several leading companies have also developed policy positions regarding biodiversity, which have direct influence over practices and impacts associated with biodiversity values. Several of these policies are explicit regarding the company's commitment to supporting and protecting World Heritage Values, Threatened Ecological Entities, and the approaches taken to avoiding, mitigating, and remediating any impacts. See the following links for company-specific biodiversity policy positions:

- BHP Billiton: http://bhpbilliton.com/bb/sustainableDevelopment/environmentalCommitment/biodiversityAndLand.jsp
- Rio Tinto: http://www.riotinto.com/ourapproach/7195_biodiversity.asp
- Xstrata: http://www.xstrata.com/sustainability/environment/biodiversity/
- Barrick Gold Corporation: http://www.barrick.com/CorporateResponsibility/Environment/Biodiversity/default.aspx
- Newmont: http://www.newmont.com/en/social/environment/biodiversity/index.asp

To support operational implementation of these policies and principles, the industry has worked collaboratively with the Commonwealth Department of Resources, Energy and Tourism (and its predecessors) to provide implementation guidance to support the protection and conservation of biodiversity through mining operations. The 'Leading Practice Sustainable Development' program has helped 'mainstream' biodiversity conservation, and certainly further integrate its consideration into mining industry practices, through a series of handbooks which provide leading practice guidance to operations. Those handbooks which provide specific guidance on biodiversity conservation, management and rehabilitation for the minerals industry include:

- 'Biodiversity Management' (2007)
- 'Water Management' (2008)
- 'Working with Indigenous Communities' (2007)
- 'Mine Rehabilitation' (2006)
- 'Mine Closure and Completion' (2006)

Importantly, many of these handbooks have been translated into other languages, and are influencing landscape management practices in developing countries, thereby representing an International contribution that Australia can claim in making biodiversity management more mainstream (at least internationally for the mining industry). See http://www.ret.gov.au/resources/mining/leading_practice_sustainable_development_program_for_the_mining_industry/Pages/LeadingPracticeSustainableDevelopmentProgramfortheMiningIndustry.aspx for further details on the program.

Putting the Biodiversity Policy Framework into Practice

Most minerals operations are in regional and remote Australia. Many companies own or manage much larger tracts of land than those that are subject to extraction activities. Additionally, many companies undertake exploration activities across land owned or leased by others. In regional and remote Australia, minerals companies are a major contributor to natural resource management, including biodiversity conservation outcomes.

Traditionally, the investment that mining operations made in landscape management was mandated by regulatory authorities through the impact assessment process, including the application of the EPBC Act. However, companies now recognise that initiatives to better-manage their non-operational lands beyond duty of care requirements reflect on their 'social license to operate'. Accordingly there has been an increasing effort by minerals companies to invest in landscape management far-beyond mandated requirements.

Here we present case studies of how the minerals industry in Australia has incorporated biodiversity conservation into its business operations. These are presented to parallel the major phases of industry's intersection with the landscape, and align with our land use policy: the planning and exploration phase, the land management phase, and the rehabilitation phase. Some of these examples include partnerships with Commonwealth-funded bodies, and all include local community engagement.

Land Use Planning to Integrate and Balance Biodiversity Conservation and Development Outcomes

Case Study 1

Biodiversity Assessment and Planning in the Bowen Basin (http://www.fba.org.au/programs/miningbiodiversity.html)

The Fitzroy Basin Association is working in partnership with BHP Billiton Mitsubishi Alliance, Xstrata Coal, Anglo Coal, and Rio Tinto Coal Australia and the Queensland Resources Council to examine ways in which the industry can contribute to biodiversity gains in the Bowen Basin. Four sub-regions of the Brigalow Belt Bioregion host more than 30 coal mines and another four subregions are being explored to find more coal. The project is looking at how best to address the cumulative impacts of many coal mines over time and across the ten million hectares that make up the eight biogeographical subregions.

The aim of this project is to ensure the future survival of threatened species and communities that live in central Queensland's coal mining areas. In January 2006 the project produced a report into the statutory framework that the Queensland and Commonwealth Governments use to assess and refuse or approve coal mines and set requirements in respect of biodiversity. More recently, selected biodiversity values of the coal mining areas in the Bowen Basin have been mapped with the aim of delineating areas whose vegetation, size and condition can contribute to the long term survival of listed ecological communities and species.

Case Study 2

Biodiversity Assessment and Planning in the Pilbara (http://www.austmus.gov.au/riotintopartnerships/pilbara/index.htm)

In a partnership between the Australian Museum and Rio Tinto, the biodiversity values of the Pilbara region of Western Australia are being systematically documented to support understanding and improved land use planning processes. With the support of Rio Tinto, an Australian Museum team is conducting a biological survey in the Pilbara region to address this knowledge gap. This work is being conducted in consultation with the Western Australian Department of Conservation and Land Management, the Western Australian Museum and other Western Australian stakeholders.

The studies are designed to build understanding of the underlying processes that govern the region's biodiversity. This will enable Rio Tinto and other land managers to monitor and evaluate production regimes with biodiversity protection in mind. Data collected through survey and ecological research will underpin tools for use in development and conservation in the region.

Case Study 3

Important Bird Areas (http://www.birdsaustralia.com.au/our-projects/important-bird-areas.html)

Important Bird Areas (IBAs) are sites of global bird conservation importance. Each IBA meets one of four global criteria used by BirdLife International. IBAs are priority areas for bird conservation - we aim to monitor birds at our IBAs, advocate their importance to government, and work with land-holders and other local people to conserve them.

In partnership with Rio Tinto, Birds Australia has identified and documented almost all of the Australian IBAs.

Through a joint commitment to conserving Australia's biodiversity, Birds Australia and Rio Tinto agreed to work together for three years to develop and implement the IBA program. The program helps Birds Australia deliver biodiversity conservation through building knowledge of birds and their threats, identifying solutions, and assisting policy makers and land managers to use this knowledge. For Rio Tinto, program outcomes will help deliver its biodiversity strategy in Australia. Rio Tinto has worked in other areas of the world to identify IBAs through its global partnership with BirdLife International.

Case Study 4

Development and Conservation Organisation's Strategic Alignment in WA

The NGO Industry Environmental Forum's (NIEF) objective is to provide a forum for conservation NGOs and the Chamber of Mineral and Energy of Western Australia (CME) member companies to identify strategic environmental issues related to the resources sector with a view to achieving mutually agreed tangible outcomes. Biodiversity and biodiversity planning issues have been central to NIEF discussions to date.

Forum members have identified the need for a better understanding of the states biodiversity values to underpin responsible resource utilisation and biodiversity conservation decision making at a strategic level. Clearer understanding of these values would help to facilitate the environmental approvals process for resource projects.

Land Management to Avoid, Minimise and Manage Biodiversity Impacts

Case Study 5

The Lake Cowal Foundation (http://www.lakecowalfoundation.org.au/)

The Lake Cowal Foundation Limited (LCF) is a non-profit Environmental Trust established in June 2000 with the support of Barrick Gold. Its primary goal is to protect and enhance Lake Cowal, a nationally significant wetland located 45km north of West Wyalong, New South Wales (NSW), Australia.

The Lake Cowal Foundation plans and implements projects with a variety of regional stakeholders to support the conservation of the lake's biodiversity values. These projects deliver significant on-ground components by providing financial assistance and working with landholders in the Lake Cowal area to protect, enhance and restore the Lake Cowal environment in a partnership arrangement. The resultant on-ground outcomes included the protection of 325 hectares of the Lake Cowal foreshores and major tributaries, including 20 km of Sandy and Bland Creeks. Community engagement and capacity building is a cross-cutting element of the projects; many people have been involved in the project including eleven local landholders and over 50 other individuals from various groups, organisations and government departments.

Case Study 6

The Bendigo Mining Environment Fund
(http://www.bendigomining.com.au/our_environment/community_relationship/environment_fund.htm)

Established in 1995, the Bendigo Mining Environment Fund is administered by a Committee and chaired by the Mayor of the City of Greater Bendigo. Through its grant allocations each year, the Bendigo Mining Environment Fund assists organisations with environmental projects to the benefit of the Bendigo community.

The grants are awarded annually, and encourage biodiversity conservation and associated capacity building in the community. Over 50 projects have been funded to date, with many focussed on biodiversity protection and rehabilitation, the fostering of cultural uses of biodiversity (e.g. bush tucker plantings), wildlife rescue and rehabilitation and targeted capacity building for further biodiversity conservation initiatives (e.g. investments in nursery infrastructure, and communication and education initiatives).

Case Study 7

Sustainable Rangeland Management in the WA Goldfields
(http://sustainability.bhpbilliton.com/2006/environment/caseStudies/biodiversity/rangelandManagement.asp)

Nickel West (BHP Billiton) is a major landowner in the northern Goldfields of Western Australia; with pastoral leases surrounding the Mount Keith and Leinster nickel operations covering approximately 1.2 million hectares. These holdings are managed by a team of 12, who are undertaking a variety of pastoral activities, including sheep and beef herding and horticulture.

In aiming to manage the rangelands in a sustainable manner, the team faces several challenges, including the remoteness of the holdings, historical overgrazing, impacts of previous exploration and mining activity, and changing pastoral methods and land use. To assist their endeavours, they participate in the Ecosystem Management Understanding (EMU) process.

The EMU process was originated in 2003 by the Centre for the Management of Arid Environments (CMAE) in collaboration with the Western Australian Department of Agriculture. It is designed to help land managers understand the complexity and inter-connectedness of rangeland biodiversity. The process provides a learning framework based on ecological patterns and processes, with a focus on drainage systems and critical eco-junctions. Integrated EMU projects have been established for all our pastoral holdings, targeting areas identified as significant in terms of biodiversity values and sustainability.

Case Study 8

Tanami Biodiversity Strategy (http://www.beyondthemine.com/2007/)

The Tanami is a region in central Northern Territory, which supports grasslands, shrublands and savanna communities. Traditional Aboriginal land owners of the Northern Tanami Desert, the Warlpiri people have managed their land for more than 25,000 years.

In 2006, Newmont Tanami started a unique Regional Biodiversity Project in collaboration with the Central Land Council and the Warlpiri Rangers from local communities to monitor the impact of current mining activities on wildlife abundance in the area. The project involves collecting data from the wider Tanami bio-region to evaluate the impact operations have had on regional biodiversity.

The study covers both plants and animals, and identifies wildlife populations, health and other information. The local knowledge and insight of the Warlpiri Rangers, enabled Newmont scientists to collect more accurate baseline data that will help in comparison to future assessments. This information also helps Newmont develop management protocols and programs for future proposed exploration, mining or other operations.

Case Study 9

Hay Point Rehabilitation and Community Education
(http://sustainability.bhpbilliton.com/2005/repository/environment/caseStudies/caseStudies21.asp)

The Hay Point terminal, located near Sarina on the central Queensland coast, handles and despatches coal from the mines operated by BHP Billiton Mitsubishi Alliance (BMA). An ongoing challenge is sustainably operating a facility adjacent to the Great Barrier Reef Marine Park World Heritage area.

On their own initiative, Hay Point Services employees began cleaning general community rubbish from the beach and foreshore. Their activities have evolved into the Hay Point Foreshore Development Project, a community partnership with the environmental group Green Corps, Sarina Landcare Catchment Management Association (SLCMA) and Sarina Shire Council.

The project site is an 18-hectare buffer zone within terminal land. Based on a master vegetation plan, the project aims to protect and revegetate the zone and provide habitat for native species of plants and animals, while still allowing public access. A five-year implementation plan is being developed to ensure restoration works and public access points do not adversely impact flora and fauna. The point and foreshore are significant in terms of regional biodiversity, with extensive mangrove forest and dune vegetation ecosystems. The beach is a nesting site for marine turtles including the vulnerable green turtle (*Chelonia mydas*) and flatback turtle (*Natator depressus*).

Landscape Rehabilitation for Biodiversity Return or Improvement

Case Study 10

11,000 ha Offset in the Stony Plains Bioregion (http://www.ozminerals.com/Media/docs/2007_SDR_Oxiana_Limited_full-1cd2c524-f9be-4998-b738-4754ea8f5c8e-0.pdf)

Oz Minerals' Prominent Hill operations are located in the western region of the Stony Plains Bioregion, within the Breakaway land system that is characterised by low hills and dissected tablelands. The vegetation of the project area generally comprises low open to very open chenopod shrubland and mallee and mulga woodland, while the vegetation of the wellfield area generally comprises chenopod low shrubland, with shrubland and hummock grassland associated with watercourses.

In order to offset the impacts at Prominent Hill, a significant environmental benefit (SEB) offset area of 11,129 ha located within the Mt Eba pastoral lease has been set aside. Contained within the SEB area are 5 major and 2 minor fauna habitats, which support 47 bird species, 11 reptile and 7 mammal species. Management of the SEB offset area is aimed at identifying and managing processes which threaten biodiversity including grazing, disturbance, weed and feral invasion. Control strategies include baiting and trapping of foxes and cats, weed management and the implementation of an extensive monitoring program. Works undertaken in the SEB during 2007 included the construction of stock exclusion fencing and the commencement of biannual monitoring during autumn and spring.

Case Study 11

Mt Owen Forest Offsets (http://www.mtowencomplex.com.au/biodiversity_conservation.html)

The Central Hunter Valley floor region of NSW has been extensively cleared of native vegetation, primarily for agriculture, mining and urban development. Ongoing pressures from economic development have resulted in further threats to natural habitats and increased the need for "biodiversity sensitive" development practices. In recognition of the importance of conserving biodiversity, Mt Owen Mine has implemented innovative practices, which will help conserve and enhance biodiversity values in the Upper Hunter Valley. Mt Owen's program of biodiversity management forms part of Xstrata Coal NSW's broader biodiversity and land management commitments.

The key components of Mt Owen's Biodiversity Management Program include a 'Biodiversity offset strategy', progressive rehabilitation of disturbed areas to native woodland, a flora and fauna monitoring and management program, and an on-going program of native forest restoration research. To offset the impacts of mining through forest communities, a new 430 hectare area of woodland (known as the "New Forest") has been established. The New Forest, originally open pastureland, was planted with native tree and shrub species indigenous to the forest and surrounding area. Growth rates and survival of the trees have been encouraging and the re-afforestation programme has established key species for fauna habitat and encouraged the movement of native fauna into the area.

Case Study 12

Arid Recovery Project (http://sustainability.bhpbilliton.com/2006/environment/caseStudies/biodiversity/aridRecoveryProject.asp)

The combined impacts of feral species and unsustainable farming have devastated Australian ecosystems since European settlement. Over 60 per cent of desert mammals have been driven to total or regional extinction, and many other animals and plants remain threatened. However, a unique partnership titled 'Arid Recovery' has started reversing these trends.

Located near BHP Billiton's Olympic Dam mine in South Australia, Arid Recovery is the largest fenced reserve in Australia from which all feral cats, foxes and rabbits have been removed. The reserve straddles the mine lease and sections of four other pastoral properties, two of which are leased by the Company. Native animals and plants are now thriving within the 86-square-kilometre enclave, which has become both a centre for ecological research and the site of a nationally significant conservation program.

Arid Recovery was initiated in 1987 by a partnership comprising the Olympic Dam mine, the South Australian Department for Environment and Heritage, the University of Adelaide and a community group, Friends of Arid Recovery. The partnership's mission is to 'facilitate restoration of arid zone ecosystems through on-ground works, applied research and industry, community and government partnerships'.

Together with other Arid Recovery partners and collaborators, BHP are committed to ensuring maintenance of the existing reserve and the sustainability of research and public education programs. A key future objective is to leverage broad-scale benefits to the environment and to the perception of resource industries by re-establishing threatened species outside the reserve, on both the Olympic Dam mine lease and surrounding pastoral properties.

Case Study 13

Koala Venture (http://www.pacificcoal.com.au/media/38_media_releases_1134.asp)

Koala Venture is an award-winning partnership between the University of Queensland and Rio Tinto Coal Australia, and is the country's longest running koala study. Koala Venture is an important element of the company's Central Queensland mining operations.

The findings that the research partners develop are used to guide land management and rehabilitation activities. Due to the partnership, there is now a better understanding of the impact of mining operations on the koala population, the mine is able to reduce the likelihood of harm to koalas, and has increased knowledge of plant species required for successful rehabilitation practices.

The research programme was recently expanded last year to include the new Clermont Mine lease, where development is progressing quickly. Radio tracking of koalas on the development site enables vegetation clearing activities to be planned to minimise the potential negative impacts on koalas during that process.

Case Study 14

Rehabilitation in the Bandalup Corridor (http://hsecreport.bhpbilliton.com/2004/repository/caseStudies/environment16.asp)

The Ravensthorpe Nickel Project (RNP; BHP Billiton) is located 155 kilometres west of Esperance in Western Australia. The project is within an agricultural region with an established network of small towns. The RNP is located within the Bandalup Corridor, a band of remnant vegetation in an agricultural region adjacent to the Fitzgerald River National Park, and falls within the buffer zone of the Fitzgerald River Biosphere, a world-renowned biodiversity area. The Western Australian Department of Conservation and Land Management (CALM) manages both the National Park and the Biosphere. One of the allowable activities within the buffer zone of a Biosphere is mining, subject to responsible environmental management.

The project's ore deposits are located in areas covered by remnant vegetation. The clearing of this vegetation associated with project development has two main impacts on biodiversity, including loss of habitat for fauna and, to a lesser extent, direct fauna impact from road traffic. The loss of fauna habitat has been compensated through the purchase of an adjacent 650-hectare 'bush block' as a conservation offset, together with the revegetation of approximately 600 hectares of existing cleared farmland to allow its incorporation back into the Bandalup Corridor.

At the completion of these revegetation activities and subsequent mine rehabilitation, the width of the Bandalup Corridor will actually be increased. Significantly, Ravensthorpe Nickel Operations (RNO), the management company 100 per cent owned by BHP Billiton, believes that the effective area for fauna habitat post mine closure will be greater than currently exists.

Case Study 15

Contributing to Recover Swift Parrot Populations (http://www.bendigomining.com.au/documents/environment/ER_2005.pdf)

In early 2005 Bendigo Mining obtained approval under the Commonwealth Environment Protection and Biodiversity Conservation Act for the expansion of its Carshalton mine site. Early and positive consultation with the Commonwealth department responsible for the Act resulted in agreement on a number of ways we could assist in the recovery of the endangered Swift Parrot.

One of the projects suggested by the Commonwealth was the development of a long-term monitoring program to track the status of the species in the Goldfields Bioregion of Victoria. We have developed this program with guidance from independent specialists, members of the Swift Parrot Recovery Team and the Victorian Department of Sustainability and Environment.

Our investment in this program enables re-direction of resources previously used in this area to other Swift Parrot recovery works. We have also secured land with significant habitat for the Swift Parrot. By protecting and rehabilitating this land, it will continue to provide and improve over-wintering habitat for the birds on their migration path from Tasmania to their main feeding grounds in the Box-Ironbark Forests of Victoria and NSW.

These programs, and Bendigo Mining's commitment to high quality progressive rehabilitation, will ensure that the minerals operation has only positive impacts on the Swift Parrot.

2. Intersection of the Minerals Industry with the EPBC Act's Implementation

Regarding our intersection with Act, in each year of the Act's operation, based on departmental statistics, the mining industry has required the most, or second most, number of approvals (see Figure 2). This is despite having a footprint in the landscape of less than 0.3% of the total landmass (see Table 1), and not being noted as a driver of biodiversity degradation in the 2006 State of the Environment Report. Referrals made by the mining industry to the Department, are twice as likely as referrals from all other sectors, to be considered a controlled action requiring approval (see Figure 1 and Figure 2 and Table 1). Again, this is despite minerals industry projects being heavily regulated through other jurisdictional processes, implemented with leading practice frameworks for environmental management, and occurring in a miniscule, almost 'biodiversity-irrelevant', fraction of the landscape (see Figure 3 and Table 1).

Based on Departmental statistics and the State of the Environment Report, there is a major disconnect between the drivers of biodiversity decline and the referrals received and approvals conducted.

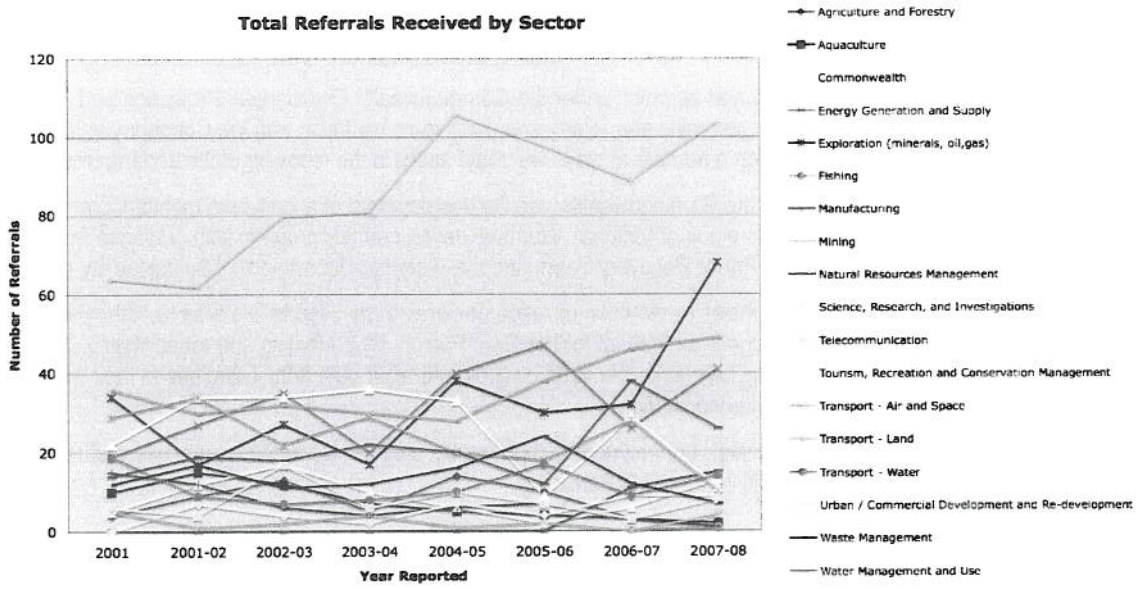

Figure 1 Compilation of Commonwealth Department of Environment Annual Report Statistics for Referrals by Sector (sector categories are combined and split as appropriate, to provide an overview)

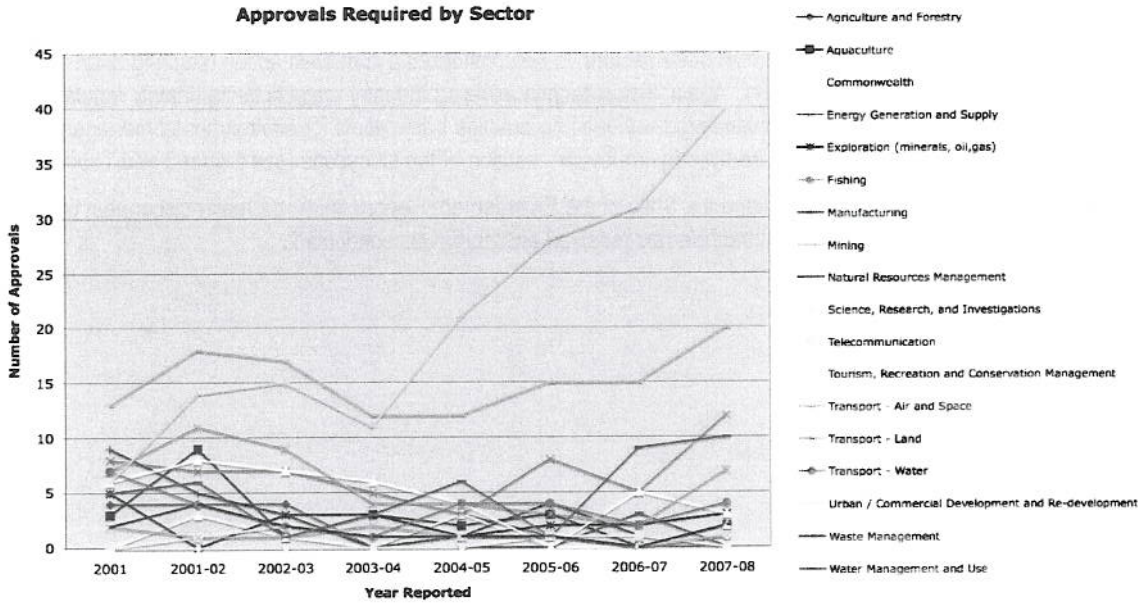

Figure 2 Compilation of Commonwealth Department of Environment Annual Report Statistics for Approvals Required by Sector (sector categories are combined and split as appropriate, to provide an overview)

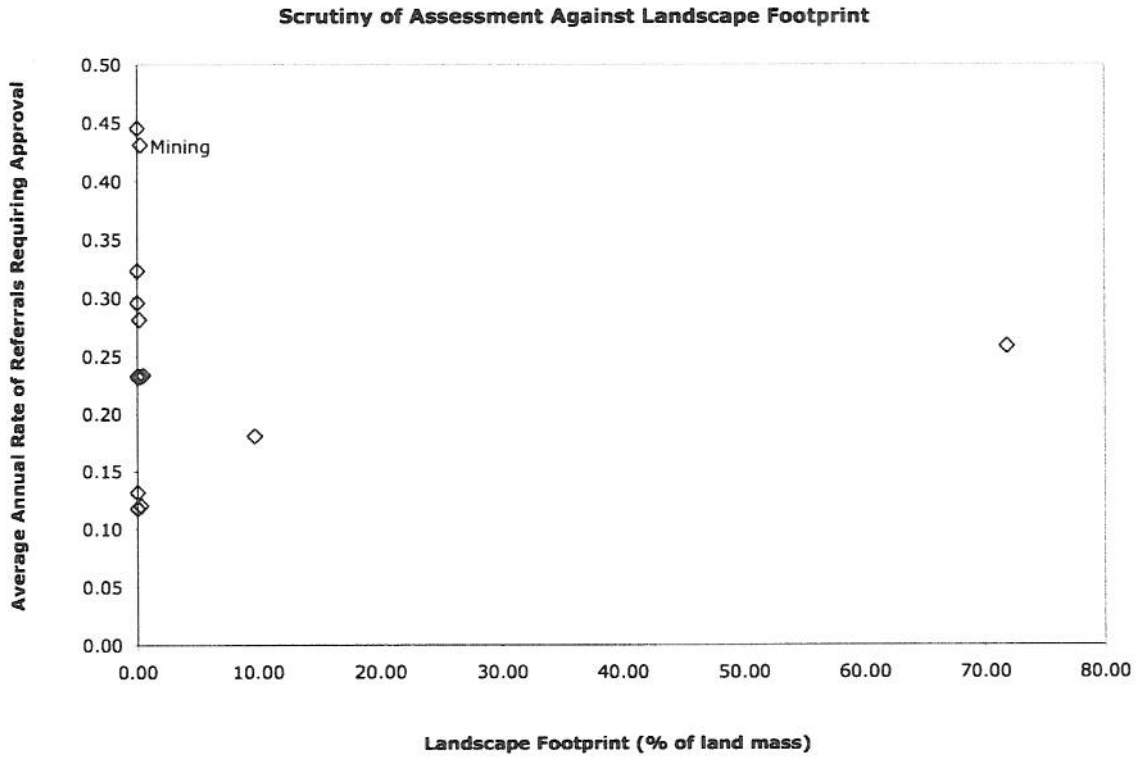

Figure 3 Compilation of Commonwealth Department of Environment Annual Report Statistics for the Rate of Approvals Required from Referrals Received compared with Footprint in the Landscape (See Table for Detailed Description)

Table 1 Summary Data for Figure 3

Sector[1]	% Land Mass[2]	Rate of Approvals Required[3]
Aquaculture	0.00	0.45
Mining	0.26	0.43
Manufacturing	0.01	0.32
Transport - Water	0.00	0.30
Transport - Land	0.18	0.28
Agriculture and Forestry	71.87	0.26
Water Management and Use	0.49	0.23
Energy Generation and Supply	0.00	0.23
Urban / Commercial Development and Re-development	0.25	0.23
Tourism, Recreation and Conservation Management	9.77	0.18
Waste Management	0.00	0.13
Commonwealth	0.29	0.12
Telecommunication	0.00	0.12

[1] Aggregation of main sectors being captured by the Act, across the years reported

[2] Based on mid-2008 BRS compilation of ACLUMP (Australian Collaborative Land Use Mapping Programme) Catchment Scale Land Use data, aggregated using common sense to the sectors identified by the Act (assume +/- 10% accuracy in aggregation)

[3] The ratio of referrals received to approvals required, 'scrutiny of assessment', by the Department, based on annual Departmental reports